

Name: _____

at1110paper_practice_test (v21)

1. Expand the following expression into standard form.

$$(8x - 3)(8x + 3)$$

$$\begin{aligned}64x^2 + 24x - 24x - 9 \\64x^2 - 9\end{aligned}$$

2. Expand the following expression into standard form.

$$(4x + 9)(5x + 3)$$

$$\begin{aligned}20x^2 + 12x + 45x + 27 \\20x^2 + 57x + 27\end{aligned}$$

3. Factor the expression.

$$16x^2 - 9$$

$$(4x + 3)(4x - 3)$$

4. Solve the equation.

$$5x^2 - 15x + 16 = 3x^2 - 2x - 5$$

$$\begin{aligned}2x^2 - 13x + 21 = 0 \\(2x - 7)(x - 3) = 0 \\x = \frac{7}{2} \quad x = 3\end{aligned}$$

5. Solve the equation with factoring by grouping.

$$12x^2 + 18x + 10x + 15 = 0$$

$$(6x + 5)(2x + 3) = 0$$
$$x = \frac{-5}{6} \quad x = \frac{-3}{2}$$

6. Factor the expression.

$$x^2 - x - 12$$

$$(x + 3)(x - 4)$$

7. Solve the equation.

$$(6x + 5)(9x - 7) = 0$$

$$x = \frac{-5}{6} \quad x = \frac{7}{9}$$

8. Expand the following expression into standard form.

$$(3x + 2)^2$$

$$9x^2 + 6x + 6x + 4$$
$$9x^2 + 12x + 4$$